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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/688,042	10/12/2000	Atsushi Watanabe	392.1702 (JDH)	5531

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EXAMINER	
BARNES, CRYSTAL J	

ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/688,042	WATANABE ET AL.	
	Examiner	Art Unit	
	Crystal J. Barnes	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *2,3,6-10 and 12-14* is/are allowed.

6)☒ Claim(s) *1,4 and 11* is/are rejected.

7)☒ Claim(s) *5* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 October 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a Final Rejection in response to the Amendment received on 01 December 2004. Claim 14 has been added. Claims 1-14 are now pending in this application.

Response to Arguments

2. Applicant's arguments with respect to claims 1-13 rejected under 35 USC 102(e) have been considered but are moot in view of the new ground of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,495,410 to Graf.

As per claim 1, the Graf reference discloses a graphic display apparatus for a robot system comprising: means for displaying (see column 13 lines 33-36, "monitor 104") and arranging a 3-D model of a robot ("3D visual image of robot 12") on a display screen ("monitor 104") to cause the displayed model ("3D visual image of robot 12") to move in animation ("simulated motion") on the screen ("monitor 104"); means for storing (see column 13 lines 28-32, "memory 100") the 3-D model of the robot ("3D visual image of robot 12") and one or more 3-D models of a peripheral equipment ("workstation model data"), a machine, or a part ("end effector model data"), which is used in a system using the robot ("robot 12"); and means for selecting (see column 13 lines 28-32, "processor 108") one or more of the 3-D models ("robot, workstation and end effector model data") stored in said storing means ("memory 100") on the display screen ("monitor 104"), wherein the 3-D model of the robot ("3D visual image of robot 12"), or the 3-D model of the robot ("3D visual image of robot 12") and the 3-D model of a peripheral equipment ("workstation model data"), a machine, or a part ("end effector model data"), which was selected by said selecting means ("processor 108"), are displayed and arranged on the display screen ("monitor 104"), with at least a part of the system using the

robot ("robot 12") being approximated (see column 13 lines 40-46, "collision checking function").

As per claim 4, the Graf reference discloses further comprising means for displaying, on the screen ("monitor 104"), the robot motion (see column 13 lines 33-36, ("simulated 3D visual image of robot 12") corresponding to at least a part of a robot program (see column 13 lines 28-32, "motion-control program segments or drive programs"), in animation ("generated simulated motion program graphics data").

As per claim 11, the rejection of claim 1 is incorporated and further claim 11 contains limitations recited in claim 1; therefore claim 11 is rejected under the same rationale as claim 1.

Allowable Subject Matter

5. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 2, 3, 6-10 and 12-14 are allowable.

7. The following is a statement of reasons for the indication of allowable subject matter:

As per claim 2, the prior art of record taken alone or in combination fails to teach the 3-D model of the robot of which dimensions were adjusted by said adjusting means, or the 3-D model of the robot and the 3-D model of peripheral equipment, a machine, or a part, which was selected by said selecting means, of which dimensions were adjusted by said adjusting means, are displayed and arranged on the display screen, with at least a part of the system using the robot being approximated.

As per claim 3, the prior art of record taken alone or in combination fails to teach the 3-D model of the robot, and the 3-D model of the peripheral equipment, the machine, or the pad, which was selected by said selecting means, of which dimensions were adjusted by said adjusting means, are displayed and arranged on the display screen with at least a part of the system using the robot being approximated.

As per claim 12, the prior art of record taken alone or in combination fails to teach the 3-D model of the robot of which dimensions were adjusted by the adjusting unit, or the 3-D model of the robot and the 3-D model of a peripheral

equipment, a machine, or a part, which was selected by the selecting unit, of which dimensions were adjusted by the adjusting unit, are displayed and arranged on the display screen, with at least a part of the system using the robot being approximated.

As per claim 13, the prior art of record taken alone or in combination fails to teach the 3-D model of the robot, and the 3-D model of the peripheral equipment, the machine, or the part, which was selected by the selecting unit, of which dimensions were adjusted by the adjusting unit, are displayed and arranged on the display screen with at least a part of the system using the robot being approximated.

As per claim 14, the prior art of record taken alone or in combination fails to teach the one or more 3-D models, which was selected by the selecting unit, is displayed and arranged on the display screen according to constraint conditions relating to at least one dimension line of the one or more 3-D models of the robot system.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to displaying robot control in general:

USPN 6,330,495 B1 to Kaneko et al.

JPPN 60-195615 to IWAMOTO et al.

US Pub. No. 2001/0018644 A1 to Schwalb et al.

Marcelo H. Ang Jr. et al., "A walk-through programmed robot for welding in shipyards", The Industrial Robot, Bedford: 1999, Volume 26, Issue 5, page 377.

T. Kesavadas et al., "Flexible virtual tools for programming robotic finishing operations", The Industrial Robot, Bedford: 1998, Volume 25, Issue 4, page 268.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.**

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is 571.272.3679. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571.272.3687. The fax

phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CJB
3 February 2005

Anthony Knight
Supervisory Patent Examiner
Group 3600